

What is claimed is:

1. A compound 8 to 50 nucleobases in length targeted to a nucleic acid molecule encoding human superoxide dismutase 1, soluble, wherein said compound specifically hybridizes with and inhibits the expression of human superoxide dismutase 1, soluble.
2. The compound of claim 1 which is an antisense oligonucleotide.
3. The compound of claim 2 wherein the antisense oligonucleotide has a sequence comprising SEQ ID NO: 13, 15, 17, 18, 20, 22, 23, 24, 25, 27, 29, 30, 31, 32, 33, 35, 36, 37, 38, 40, 41, 42, 43, 45, 48, 52, 59, 60, 61, 67, 69, 74, 78, 80, 81, 83 or 90.
4. The compound of claim 2 wherein the antisense oligonucleotide comprises at least one modified internucleoside linkage.
5. The compound of claim 4 wherein the modified internucleoside linkage is a phosphorothioate linkage.
6. The compound of claim 2 wherein the antisense oligonucleotide comprises at least one modified sugar moiety.
7. The compound of claim 6 wherein the modified sugar moiety is a 2'-O-methoxyethyl sugar moiety.
8. The compound of claim 2 wherein the antisense oligonucleotide comprises at least one modified nucleobase.
9. The compound of claim 8 wherein the modified nucleobase is a 5-methylcytosine.
10. The compound of claim 2 wherein the antisense oligonucleotide is a chimeric oligonucleotide.
11. A compound 8 to 50 nucleobases in length which specifically hybridizes with at least an 8-nucleobase portion of an active site on a nucleic acid molecule encoding human superoxide dismutase 1, soluble.
12. A composition comprising the compound of claim 1 and a pharmaceutically acceptable carrier or diluent.

13. The composition of claim 12 further comprising a colloidal dispersion system.

14. The composition of claim 12 wherein the compound is an antisense oligonucleotide.

15. A method of inhibiting the expression of superoxide dismutase 1, soluble in human cells or tissues comprising contacting said cells or tissues with the compound of claim 1 so that expression of superoxide dismutase 1, soluble is inhibited.

16. A method of treating a human having a disease or condition associated with superoxide dismutase 1, soluble comprising administering to human a therapeutically or prophylactically effective amount of the compound of claim 1 so that expression of superoxide dismutase 1, soluble is inhibited.

17. The method of claim 16 wherein the disease or condition is amyotrophic lateral sclerosis.

18. The method of claim 16 wherein the disease or condition arises from aberrant apoptosis.

19. The method of claim 16 wherein the disease or condition is a hyperproliferative disorder.

20. The compound of claim 1 targeted to a nucleic acid molecule encoding an alternatively spliced variant of human superoxide dismutase 1, soluble, wherein said compound specifically hybridizes with and inhibits the expression of an alternatively spliced variant of human superoxide dismutase 1, soluble.